



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AMENDMENT "A"

APPLICANT: Oliver Heid GROUP ART UNIT: 2862  
SERIAL NO.: 09/840,577 EXAMINER: E. Peick  
FILED: April 23, 2001 CONFIRMATION NO.:3801  
TITLE: "ELECTRICAL COIL"

Assistant Commissioner for Patents,

Washington, D.C. 20231

SIR:

In response to the Office Action dated July 3, 2002, Applicant herewith amends the application as follows.

IN THE SPECIFICATION

The paragraph beginning at page 6, line 11 has been amended as follows:

A heat insulator 13a enclosing the conductor 12 is arranged between the electrical conductor 12 and a carrier structure 15a of the gradient coil system 1a, for example a cast resin. The heat insulator is fashioned of fibers and/or high-resistance foam and is composed of glass, ceramic, mineral materials and/or polymer materials, so that a thermal conductivity of the heat insulator 13a is less by a factor 3 than the thermal conductivity of the carrier structure 15a. Therefore, the conductor 12 can assume comparably high temperatures relative to the carrier structure 15a, and a cooling medium current can be operated with a high temperature drop in order to obtain high power densities. A structure-damaging alternating heating and cooling of the carrier structure 15a surrounding the electrical conductor 12 is thus prevented. Furthermore, a high temperature stability and therefore a high quality of magnetic resonance images is obtained for the means 14 for reducing non-homogeneity of the basic magnetic field, for example a passive shim device in a formation as iron sheets. In an embodiment, the electrical conductor 12 and the cooling pipe 11a are fashioned corresponding to the aforementioned German OS 198 39 987.

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